

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Yasuo SUGAHARA

Serial No. 09/375,005

Group Art Unit: 3622

Confirmation No. 4452

Filed: August 16, 1999

Examiner: J. Janvier

For: INFORMATION DECISION APPARATUS SPECIFYING CUSTOMERS AND DECIDING APPROPRIATE INFORMATION FOR CUSTOMERS TO PROMOTE A PRODUCT, METHOD THEREOF AND COMPUTER-READABLE RECORDING MEDIUM THEREOF (AS AMENDED)

APPELLANT'S BRIEF UNDER 37 C.F.R. § 1.192

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NOV 25 2003

Assistant Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

GROUP 3600

Sir:

In a Notice of Appeal filed August 20, 2003, the applicant appealed the Examiner's May 20, 2003, Office Action finally rejecting claims 1-28. Appellant's Brief together with the requisite fee set forth in 37 CFR § 1.17 is submitted herewith. A Petition for a one-month extension of time, together with the requisite fee for same, is submitted herewith, thereby extending the period for response to November 20, 2003.

I. REAL PARTY IN INTEREST (37 CFR § 1.192(C)(1))

The real party in interest is Fujitsu Limited, the assignee of the subject application.

RELATED APPEALS AND INTERFERENCES (37 CFR § 1.192(C)(2))

330.00 DA The applicant and the undersigned representative are not aware of any other appeals or interferences that will directly affect or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

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III. STATUS OF CLAIMS (37 CFR § 1.192(C)(3))

Appealed claims 1-28 stand rejected. These are the only pending claims in the subject application.

IV. STATUS OF AMENDMENTS (37 CFR § 1.192(C)(4))

After the final Office Action of May 20, 2003, an After Final Amendment was filed and entered to put the claims in better form for appeal. The After Final Amendment was acknowledged and entered by way of an Advisory Action issued September 22, 2003. No other amendment has been filed subsequent to the final Office Action of May 20, 2003.

V. SUMMARY OF INVENTION (37 CFR § 1.192(C)(5))

In one aspect, the present invention relates to a method or system of marketing a designated or identified promotion product. As discussed in the Background of the Invention, the product cycle for products such as computers is short. The products available for purchase change rapidly. It is difficult for consumers to choose what to purchase. This also makes it difficult for a vendor to sell a new product such as a new computer. Aspects of the present invention improve the flow of information to consumers. Information may be directed and tailored to past purchasers most likely to find the information relevant.

In various aspects, the present invention starts with a product being promoted (see generally page 11, lines 15-18; Figure 8, S100a, S100b, or S100c; and page 13, lines 23-28). The promotion product may be used to find previously purchased products that the marketer deems to be suitable to be replaced by the promotion product (page 14, lines 25-27; Figure 7, S1; and page 11, line 3). Suitability for replacement may be based, for example, on a performance comparison between the promotion product and the potential products to be replaced (Figure 8, S101; page 14, lines 28-35). Suitability may also be based on other product information such as operating system version (page 15, lines 11-20). Because a key into the

product information database 5 (Figures 1 and 6) may be used, any product information in that database may potentially be used to find products suitable to be replaced by the promoting product. The found products suitable to be replaced may then be used to find customers who purchased them (Figure 7, S2; and page 11, lines 8 and 9).

Past purchases of the found customers may then be analyzed to determine the preferences or tendencies of the found customers (Figure 7, S3; page 11, line 11; Figure 9, S301-S304; and page 16, lines 2-11). This feature can have more specific features when applied to marketing computer systems. The purchasing tendencies of a customer may be categorized by general factors such as price, size, performance, extendibility, etc. (page 16, line 2 to page 17 line 36). For example, a past purchased product type (e.g. notebook) may be mapped to an abstract purchasing trend (e.g. space saving and performance) (Figure 4A); page 16, lines 17-19).

Suitable product information such as an introduction may then be found based on one or more found purchasing tendencies of a found customer, for example by using a matrix that maps one or more purchasing tendencies to corresponding units of product information (Figure 5; and page 18, lines 3-16).

VI. ISSUES (37 CFR § 1.192(C)(6))

At issue is whether claims 1-8, 16-20, 22, and 24 distinguish over U.S. Patent No. 5,649,114 to Deaton.

Also at issue is whether claims 9-15, 21, 23, and 25-28 distinguish over Deaton in view of facts cited as being Officially Noticed.

Also at issue is whether Official Notice has been improperly relied on.

VII. GROUPING OF CLAIMS (37 CFR § 1.192(C)(7))

Claims 1-8, 16-20, 22, and 24, commonly rejected under 35 U.S.C. § 102, do not stand or fall together. Claims 9-15, 21, 23, and 25-28, commonly rejected under 35 U.S.C. § 103 do not stand or fall together.

VIII. ARGUMENT (37 CFR § 1.192(C)(8))

The References

Deaton

Deaton discusses a system for preparing lists of customers to be marketed to, and tailoring the incentives to be offered to a customer that is to be marketed to. The overall purpose of Deaton is to efficiently improve the sales to certain customers. For this purpose, Deaton discusses two forms of marketing. First, coupons or the like are generated on the fly when a customer buys something at a point of sale (POS). A POS is described as a transaction terminal or register. Second coupons are generated and mailed to customers that have been placed in a marketing list. The customer marketing lists in Deaton are gradually accumulated during POS transactions. For example, when a customer's purchase is rung up, the customer is added to a list of infrequent shoppers if so identified. A more detailed analysis of Deaton follows.

Referring to the outline of Deaton at col. 10, line 31, Deaton has the following sections:

1.0 Hardware, from col. 11 to col. 21 - POS transaction system with databases and network; 2.0 Function, from col. 22 to col. 34 - not related to marketing, describes operation of hardware; 3.0 Program, from col. 35 to col. 57 - describes logic, database, and communications of program that implements the transaction system; 4.0 Alternative Embodiments, at col. 58 - describes implementation or system variations such as multi-store architecture, types of operating systems, local-remote issues such as data transfer, etc.; and 5.0 Targeted Marketing Functions, from col. 58 to the end.

The Targeted Marketing Functions of section 5.0 are the sections cited by the Examiner. Deaton discusses the following subsections of section 5.

5.1 Automatic building of a retail database, from col. 58 to col. 61 - discusses getting customer account number and adding/updating corresponding customer record, for example "shopping event and dollars spent is recorded in order to build a shopping history for each customer's record" (step 73 at col. 61, lines 30-33).

5.2 Targeted Marketing Program, from col. 61 line 34 to col. 62 line 56 - discusses generating a list of infrequent or non customers to receive coupons or advertising by logging a transacting customer who is not in a store's database of customers, in particular this subsection "begins with the stored database of existing customers" (col. 62, line 32), then a list of customers is used to "allow the mailing of advertising material ... to customers who have not [or who have infrequently] shopped" (col. 62, lines 52-55).

5.3 Infrequent Shopper Database and Marketing, from col. 62 line 57 to col. 64 line 63 - similar to subsection 5.2, but discusses identifying infrequent customers based on their not having shopped within a time such as the last 30 days (generates "a list of the store's customers who have not shopped this store since a pre-selected ... date, and may be used for targeted marketing such as mailings", step 50 at col. 64, lines 13-15).

5.4 Marketing Based on Range of Last Shopping Dates, from col. 64 line 63 to col. 65 line 63 - similar to 5.2 and 5.3, but where customers who last shopped in a predetermined date range are targeted.

5.5 Dissemination of POS Coupons and Direct Mail Coupons Based Upon Shopping History, from col. 65 line 64 to col. 68 line 19 - discusses that coupons may be distributed to customers based upon the frequency of shopping, dollar volume or other criteria based upon the shopping habits of the customer in the list of customers to be marketed to.

5.6 Dissemination of POS Coupons and Direct Mail Coupons Based Upon Scanned Data, from col. 68 line 20 col. 70 line 29 - at time of sale, system determines whether customer has not purchased particular product group or department, and incents accordingly, in other words, the "system generates coupons based upon the lack of purchase of a particular item" for a given customer (col. 68, lines 66 and 67).

5.7 Second Alternate Embodiment of Payment Processing and Point-of-Sale Marketing System, from col. 70 line 30 onward - discusses "provid[ing] the ability to generate a large number of different types of coupons depending upon the customer's prior shopping history", (col. 104, lines 30-38), and , the "present system retains a stored shopping history in order to make an intelligent decision as to incent or not" and thus determine and distribute "an individualized, personalized, custom-tailored, inducement based on individualized consumption rate", or degree of absenteeism, or average spending per visit, or average consumption rate, etc. determine incentives for a customer, discusses tracking products purchased by a customer and not incenting with a product the customer will likely buy anyway, discusses issuing incentive based on anticipated next purchase date of a product ... "system thus uses a prior shopping history of the customer in order to provide the type of coupon most likely to provide an incentive" (col. 71, lines 64-67), discusses determining whether a customer is a bargain hunters to determine how to best incent the customer, and as summarized at col. 101, lines 44-47, "the present system can thus determine and distribute an individualized, personalized, custom-tailored, inducement based on individualized consumption rate.

As discussed below with reference to the claims, Deaton differs in that rather than using a promotion product to find customers to be marketed to, it first identifies customers to be marketed to without reference to a specific product to be marketed, for example by identifying infrequent shoppers, shoppers out of their geographic area, shoppers that have never visited a store, etc. And, then Deaton tailors the marketing incentive for the thus-identified customers. For example, an incentive for a customer may be tailored by adjusting the products to be given a discount, by adjusting the amount of a coupon, and so on.

The Deaton reference has been aptly characterized by the Examiner as a "jumbo" patent. Furthermore, the rejection cites numerous and lengthy portions of Deaton. Included with this Appeal Brief is Appendix B, which summarizes most portions of Deaton cited by the Examiner.

An important summary aspect of Deaton is that the only time Deaton searches for a customer is when a customer is making a purchase and the system needs to know whether a record for the customer exists. This search is on the basis of whether there is an ID, account, etc. for the purchasing customer. Nowhere does Deaton discuss searching for a customer on

bases such as the previous purchase of a product suitable to be replaced by a promotion product, as well as other bases.

Officially Noticed Facts

The Deaton reference was supplemented by Officially Noticed facts. The Officially Noticed facts, referred to in the rejection as "public disclosure", may be summarized as using a customer's transaction history to target a customer based on the computer system speed (e.g. high-end, mid-range, etc.) and computer system type (e.g. brand name, desktop, notebook, etc.) (page 14, line 12 to page 15, line 4, of the May 20, 2003 Office Action). The Official Notice also proposes that computer trade-ins have been practiced in the prior art (page 15, lines 5 to 19), as have trade-ins for more powerful systems (page 15, line 19). The Official Notice is also the putative source of the motive for modifying or supplementing the Deaton reference. In sum, Official Notice is used to add to Deaton features of the claims that are specific to computer marketing.

Arguments

Included herewith is Appendix C, which shows the features upon which the following claim groupings are organized.

Group I (features A and E): Claims 9, 15, 21, 23, 25, and 27.

Group II (features A, B, C, and D): Claims 1, 16, 22, 24, and 26.

Group III (features A, B, C, D, and G): Claim 10.

Group IV (features A, B, C, D, and F): Claim 28.

Group V (improper motive): Claims 9-15, 21, 23, and 25-28

Group I: Claims 9, 15, 21, 23, 25, and 27

Claim 9 for example recites (A) "search[ing] for target customers based on their having purchased a product suitable to be replaced", and (E) "based on the product suitable to be replaced having a lower performance level than the promoting product".

As discussed above, Deaton begins its marketing process with a list of customers or a customer conducting a transaction at the point of sale. The list of customers may be generated at the time of sale by spotting and accumulating customers that have not shopped since a pre-selected date (Figures 15A and 15B, steps 33 and 50), or who have not shopped within a date range (Figures 16A and 16B, steps 27 and 49). Deaton can also generate coupons on the fly at the time of purchase based on criteria such as a customer's volume, frequency, and other criteria (Figure 17A, steps 14, 15, 17, 23, and 18). In both cases, Deaton starts its targeting process with a customer, not a promotion product that leads to a customer.

Figures 14A and 14B, and steps 3-53 (col. 61, line 58 to col. 62, line 28) discuss progressively generating a list of target customers (the "TARGET FILE") based on whether a transacting customer is outside the geographic region of the store where the transaction is occurring. Then, "[a]fter developing this list of infrequent shoppers, the store can then mail out direct mail enticements to the customer, such as providing them with coupons and the like if they shop at that particular store" (col. 68, lines 38-41).

Figures 15A and 15B and steps 3-50 (col. 63, line 45 to col. 64, line 15) discuss progressively generating a list of target customers based on whether a transacting customer has last shopped within a preselected date. Similarly, Figures 16A and 16B and related text discuss generating a target customer list based on a preselected last shopping date range. Again, the target customer list is used "to indicate what type of coupon or other incentive reward is to be dispensed, and the employee hands the coupons to the customer, or in the alternative the clerk/operator may mark or set aside the check for use as a source of a mailing list for distribution of incentives." (col. 67, lines 30-35).

Deaton emphasizes that incentives are driven by customer identity rather than a promotion product; "[t]he present invention differs from the systems disclosed in the above-identified patents because, among other things, the present system generates coupons based

upon the lack of purchase of a particular item by comparing against stored history for unique customer IDs, rather than because of the purchase of a particular item" (col. 68, lines 64-67). Column 71, lines 31 to 44 have been cited as relating to customer tracking. However, this portion of Deaton is also driven by the pre-identified customer identity. The system starts with a customer who has been determined to need incenting (e.g. a customer from the "TARGET LIST" or a customer flagged when conducting a transaction), and coupons are custom-tailored to the customer based sometimes on their past purchases. Which products are to be promoted is determined based on and responsive to the customer who has been determined to need incenting. As mentioned at the bottom of column 71, "[t]he system thus uses a prior shopping history of the customer in order to provide the type of coupon most likely to provide an incentive". In other words, the product to be promoted (e.g. included on a coupon) is determined based on the customer deemed to need incenting.

This customer-to-product process of Deaton is different, if not the reverse of, feature (A) of claims 9, 15, 21, 23, 25, and 27. Claim 9, for example, recites "search[ing] for target customers based on their having purchased a product suitable to be replaced". In Deaton, the only search for customers is during a POS transaction when a customer database is searched to determine whether there exists a customer record for the transacting customer (and creating or updating the same). A comprehensive review of Deaton shows that the only time a customer is searched for is when the customer is making a transaction and the system needs to retrieve the customer's record if it exists (col. 5, lines 19-26; col. 5, lines 60-62; col. 29, lines 3-10; col. 37, lines 53-59; col. 62, lines 16 and 17; and col. 80, line 45). In Deaton, the analysis of past purchases of, arguably, "products suitable to be replaced" begins with an already known customer. If products suitable to be replaced are found, they are not used to find a customer who purchased them (this is already known), as recited in claims 9, 15, 21, 23, 25, and 27. Rather, they are simply used to custom-tailor the customer's coupons.

Claims 9, 15, 21, 23, 25, and 27 also recite a feature (E) of searching for customers who purchased a product suitable to be replaced "based on the product suitable to be replaced having a lower performance level than the promoting product" (claim 9). Claim 9 and others were discussed at the May 20, 2003 Office Action from pages 12 to 16. The rejection only provides a rambling discussion about how Deaton uses customer purchasing tendencies. The

rejection is improper because feature (E) is not addressed. Also, feature (E) is not taught by Deaton for reasons above related to feature (A). That is to say, the feature (E) is used in searching for customers. Deaton does not search for customers on the basis of feature (E).

It might be argued that feature (E) was supplied by the Examiner's reference to Officially Noticed facts, or "public disclosure". However, Official Notice is not proper, as in this case, where the asserted fact is not capable of instant and unquestionable verification as being well known. Examples of facts that may be Officially Noticed include: a flame intensity may be adjusted according to a heat requirement; the weight of an element in the periodic table; or that a tape recorder erases when recording. Furthermore, assertions of specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. In re Ahlert, 424 F.2d 1088, 1091, 165 USPQ 418, 420. The Official Notice in the present rejection is not of the type that is capable of instant verification and is based on specific knowledge of the Examiner. This conclusion is confirmed by the Examiner's remark at an Interview that multiple searches for documentary support found none. A prima facie case of obviousness has not been made.

Furthermore, the nature of the Official Notice taken by the Examiner is so broad that it amounts to an assertion of personal knowledge of the general state of the art at the time of the present invention, rather than an assertion of a particular fact subject to instant verification. For example, in responding to the Applicant's traversal of the use of Official Notice, the Examiner characterized the nature of the Officially Noticed facts as "business strategies practiced or used by professionals in the art in the 1990's ... strategies or methods [that] have been used or practiced in the industry form many years well before the filing date of the Instant Application" (page 3, lines 11-18 of the May 20, 2003 Office Action). See In re Eynde, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973) ("[W]e reject the notion that judicial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice", emphasis added).

Claims 9, 15, 21, 23, 25, and 27 also recite a tendency matrix table that is used to find product information based on a customer's transaction tendencies. The rejection notes that Deaton uses two tendencies to determine how to incent a given customer, however there is no

discussion of a tendency matrix table. Deaton does not have this feature and the feature is not mentioned among the Officially Noticed facts.

Group II: Claims 1, 16, 22, 24, and 26

Claims 1, 16, 22, 24, and 26 recite features similar or identical to feature (A) discussed above and are therefore patentable over Deaton for the reasons discussed above.

Claims 1, 16, 22, 24, and 26 also recite a feature (B) of searching for customers who actually purchased a product suitable to be replaced *by the promoting product* (e.g. "based on the product suitable to be replaced having a lower performance level than the promoting product", claim 9). This feature is related to the search for customers to be targeted for marketing.

Claims 1, 16, 22, 24, and 26 are also separately patentable because, as for example in claim 1, (C) finding the product(s) to be replaced is linked to and follows the identifying of the promotion product (e.g. "[finding] previously purchased products that are suitable to be replaced by the promotion product ... by comparing the specification information of the promotion product to specification information of previously purchased products ... [and then searching] for target customers based on their having previously purchased the products suitable to be replaced", claim 1). See also claim 26, which recites "finding a previously purchased computer to be replaced by a computer being promoted, by matching ... previously purchased computer to ... the promoting computer [and] finding a target customer who previously purchased the computer to be replaced".

In Deaton, the opposite process is performed. First, a customer that needs to be incented is identified (e.g. an infrequent shopper), and then a product that the customer may have purchased is determined to be suitable to be replaced. The customer leads to the product to be replaced. With features (B) and (C), the product to be replaced leads to the previously unknown customer. As discussed above, Deaton does not search for customers based on purchases, but rather searches for purchases based on a given customer who was previously determined to need incenting.

Claims 1, 16, 22, 24, and 26 are also separately patentable because they recite (D) "fit[ting] product introduction information to the transaction tendencies of each of the [searched

for] target customers" (claim 1). Claims 16, 22, 24, and 26 recite similar features. At page 8, line 16, the rejection proposes that this feature is either inherent or implicit at col. 71, lines 31-67 of Deaton. However, this portion of Deaton only discusses printing coupons of products tracked for a customer. The rejection gives no explanation why a printed product coupon must include a product introduction. Furthermore, the feature (D) recites an action of fitting an introduction to transaction tendencies; according to the Merriam Webster Dictionary, the verb "fit" can be "to cause to conform to or suit something". In claim 1, for example, the product information itself is subjected to the act of fitting. Deaton determines or arguably "fits" which product is to be included on a coupon, and what value to assign to the coupon. Neither of these are the same as fitting a product introduction to a transaction tendency of a customer.

Group III: Claim 10

Claim 10 recites features similar to features (A), (B), (C), and (D) above, and is distinguishable over the art for the reasons above.

Claim 10 is separately patentable because it recites (G) "finding a previously purchased computer to be replaced by the computer being promoted, by matching a rank and type of the previously purchased computer to product specification information specifying a rank and a type of the promoting computer, where the ranks rank a speed and a price of the computers relative to other computers, and where the types specify system types of the computers".

This feature was provided only on the basis of Officially Noticed facts. However, as discussed above, the use of Official Notice in the present case is improper. Official Notice has been used as a cloak for introducing the Examiner's personal belief of the state of the art without documentary support that may be challenged ("the Examiner is well positioned or qualified to disclose business strategies practiced or used by professionals in the art", page 3, lines 11 and 12 of the May 20, 2003 Office Action). This practice precludes a discussion based on documented facts of record and has been ruled improper by numerous court and Board decisions.

Group IV: Claim 28

Claim is patentable because it recites features similar to features (A) to (D) discussed above.

Claim 28 is separately patentable because it recites (F) "determining a category of size of computers that the customer has tended to purchase by analyzing the purchase history database with respect to the customer". The rejection does not specifically address this feature, and it is not found in the cited prior art.

Group V: Claims 9-15, 21, 23, and 25-28

Claims 9-15, 21, 23, and 25-28 are patentable, in various combinations, for reasons given above. The rejection of these claims is also improper because of an improper motive to combine the prior art.

Claims 9-15, 21, 23, and 25-28 were rejected under § 103. The motive for modifying Deaton with the Officially Noticed computer marketing features is improper. The motive, although difficult to identify, appears to be at page 16, lines 15-20 (in an effort to boost sales ... maintaining a good relationship with the customer ... preventing the customer from buying a similar or comparable system from a competitor ..."). The motive is not found in the prior art. The motive is only a putative benefit that results from the references as combined. A motive that would lead to the combination is not given. Furthermore, the motive is too general. It is always desirable to improve sales and customer relations. A motive to combine must be one that would lead one skilled in the art to use the specific features of claims 9-15, 21, 23, and 25-28.

Dependent Claims

The dependent claims 2-8, 11-14, and 17-20 stand or fall according to their parent claims.

Conclusion

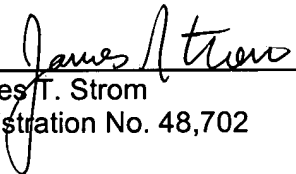
As can be seen from the arguments above, the pending claims recite features that patentably distinguish from the prior art. Reversal of the rejections is respectfully requested.

Respectfully submitted,

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APPENDIX A (37 CFR § 1.192(a)(9))

1. An information decision apparatus for marketing a promotion product responsive to inputting information identifying the promotion product, comprising:

a replacement product finder that finds previously purchased products that are suitable to be replaced by the promotion product based on product specification information specifying the promotion product, where the products suitable to be replaced are found by comparing the specification information of the promotion product to specification information of previously purchased products;

a target customer finder that searches for target customers based on their having previously purchased the products suitable to be replaced by searching transaction histories of a plurality of customers for customers that previously purchased the products suitable to be replaced;

a transaction tendencies analyzer that determines transaction tendencies of the target customers by analyzing the transaction histories with respect to the target customers, where the determined transaction tendencies reflect common general properties of products that the target customers has tended to purchase;

a determiner that individually fits product introduction information to the transaction tendencies of each of the target customers determined by the transaction tendencies analyzer by selecting from among a plurality of pre-existing product introductions the product introduction information having content that corresponds to the transaction tendencies of each of the target customers; and

using the individually fitted product introductions so as to individually introduce to the target customers the promoting product to replace said products to be replaced and that were previously purchased by the target customers being introduced.

2. The information decision apparatus as claimed in claim 1, wherein said transaction tendencies analyzer further comprises a transaction tendencies determiner that determines at least one transaction tendency of the target customer in accordance with at least one product type listed in the transaction history of the target customer.

3. The information decision apparatus as claimed in claim 1, wherein said transaction tendencies analyzer further comprises:

a product type conversion table that converts a product type into at least one transaction tendency of the target customer, where said product type conversion table is recorded in a recording medium; and

a transaction tendencies determiner that determines at least one transaction tendency of the target customer by converting at least one product type listed in the transaction history of the target customer by using the product type conversion table.

4. The information decision apparatus as claimed in claim 1, wherein said transaction tendencies analyzer further comprises a transaction tendencies determiner that determines at least one of the target customer transaction tendency in accordance with at least one product rank listed in the transaction history of the target customer.

5. The information decision apparatus as claimed in claim 1, wherein said transaction tendencies analyzer further comprises;

a product rank conversion table that converts a product rank into at least one transaction tendency of the target customer, and said product rank and conversion table are recorded in a recording medium; and

a transaction tendencies determiner that determines at least one product rank listed in the transaction history of the target customer by using the product rank conversion table.

6. The information decision apparatus as claimed in claim 1, wherein said determiner further comprises:

a first transaction tendencies determiner that determines at least one transaction tendency of the target customer in accordance with at least one product type listed in a transaction history of the target customer; and

a second transaction tendencies determiner that determines at least one transaction tendency of the target customer in accordance with at least one product rank listed in the transaction history of the target customer; and

said determiner decides on product introduction information that fits the tendencies of the target customer based on the transaction tendencies of the target customer decided by the first transaction tendencies decision part and the second transaction tendencies decision part.

7. The information decision apparatus as claimed in claim 1, wherein the product introduction information is used to promote to the target customer used products that fit the tendencies of the target customer.

8. The information decision apparatus as claimed in claim 1, wherein the product introduction information is used to promote to the target customer used products that fit the tendencies of the target customer.

9. An information decision apparatus for marketing a promoting product responsive to inputting information identifying the promoting product, comprising:

a target customer finder that searches for target customers based on their having purchased a product suitable to be replaced and also based on the product suitable to be replaced having a lower performance level than the promoting product;

a transaction tendencies analyzer that determines transaction tendencies of the target customers by analyzing a transaction history for each of the target customers, where the determined transaction tendencies reflect common general properties of products that the target customers have tended to purchase;

a tendency matrix table categorizing the transaction tendencies into at least two general categories and indicates different product information by a combination of the transaction tendencies, where the two general categories comprise a speed purchasing tendency and a system type purchasing tendency; and

an information determiner that determines the product information for each of the target customers by referring to the tendency matrix table based on the determined transaction tendencies.

10. A method of information decision for marketing a computer being promoted responsive to inputting information identifying the computer being promoted, comprising:

automatically finding a previously purchased computer to be replaced by the computer being promoted, by matching a rank and type of the previously purchased computer to product specification information specifying a rank and a type of the promoting computer, where the ranks rank a speed and a price of the computers relative to other computers, and where the types specify system types of the computers;

searching for a target customer based on the target customer having previously purchased said computer to be replaced, by searching, in transaction histories of a plurality of customers, for customers who previously purchased the computer designated to be replaced;

deriving transaction tendencies of the target customer by analyzing a transaction history of the target customer; and

deciding on product introduction information that fits the transaction tendencies of the target customer by matching the rank and type of the promoting personal computer to the transaction tendencies of the target customer, where the product information is capable of being used to introduce to the target customer the promoting computer to replace the computer previously purchased by the target customer.

11. The method as claimed in claim 10, wherein the deriving further comprises:

deciding on at least one transaction tendency of the target customer in accordance with at least one product type listed in a transaction history of the target customer; and

deciding on at least one transaction tendency of the target customer in accordance with at least one product rank listed in the transaction history of the target customer.

12. The method as claimed in claim 10, wherein the deriving further comprises:

deciding on at least one transaction tendency of the target customer in accordance with at least one product type listed in a transaction history of the target customer; and

deciding on at least one more transaction tendency of the target customer in accordance with at least one product rank listed in the transaction history of the target customer, and wherein said finding said target customer further comprises

deciding product introduction information that fits the tendencies of the target customer based on the transaction tendencies of the target customer decided in said deciding on said transaction tendencies.

13. The method as claimed in claim 10, wherein the product introduction information is used to promote to the target customer new products that fit the transaction tendencies of the target customer.

14. The method as claimed in claim 10, wherein the product introduction information is used to promote to the target customer used products that fit the transaction tendencies of the target customer.

15. A method of information decision for marketing a product being promoted responsive to inputting information identifying the product being promoted, comprising:
searching for target customers based on their having purchased a product suitable to be replaced that has a lower performance level than the promoting product;
determining transaction tendencies of the target customers by analyzing a transaction history for each of the target customers, where the determined transaction tendencies reflect common general properties of products that the target customers have tended to purchase;
categorizing the transaction tendencies into at least two categories and indicating different product information by a combination of the transaction tendencies, where the two categories comprise a speed purchasing tendency and a system type purchasing tendency; and
deciding on the product information for each of the target customers by referring to a tendency matrix table based on the determined transaction tendencies.

16. A computer-readable recording medium recorded with a program for causing a computer to make a decision, said program comprising:

finding a product suitable to be replaced by a promoting product based on product specification information specifying a promoting product, where the product to be replaced is found by comparing the specification information of the promoting product to specification information of previously purchased product;

finding a target customer who purchased said product suitable to be replaced by searching transaction histories of a plurality of customers for customers that previously purchased the product suitable to be replaced;

determining transaction tendencies of the target customer by analyzing the transaction histories with respect to said target customer, where the determined transaction tendencies reflect common general properties of products that the target customer has tended to purchase; and

fitting product introduction information to the transaction tendencies of the target customer by selecting from among a plurality pre-existing of product introductions the product introduction information having content that corresponds to the transaction tendencies of the target customer, so as to introduce to the target customer the promoting product to replace the product to be replaced that was previously purchased by the target customer.

17. The computer-readable recording medium as claimed in claim 16, wherein the determining further comprises:

deciding on at least one transaction tendency of the target customer in accordance with at least one product type listed in a transaction history of the target customer; and

deciding on at least one transaction tendency of the target customer in accordance with at least one product rank listed in the transaction history of the target customer.

18. The computer-readable recording medium as claimed in claim 16, wherein the determining further comprises:

deciding on at least one transaction tendency of the target customer in accordance with at least one product type listed in a transaction history of the target customer; and

deciding on at least one more transaction tendency of the target customer in accordance with at least one product rank listed in the transaction history of the target customer, and wherein the finding a target customer further comprises

deciding on product introduction information that fits the tendencies based on the transaction tendencies of the target customer decided by the said deciding on said transaction tendencies.

19. The computer-readable recording medium as claimed in claim 16, wherein the product introduction information is used to promote to the target customer new products that fit the transaction tendencies of the target customer.

20. The computer-readable recording medium as claimed in claim 16, wherein said product introduction information is used to promote to the target customer used products that fit the transaction tendencies of the target customer.

21. A computer-readable recording medium recorded with a program for causing a computer make information decision, said program comprising:

finding target customers who purchased a product suitable to be replaced that has a lower performance level than a promoting product, in response to identifying the promoting product;

determining transaction tendencies by analyzing a transaction history for each of the target customers, where the determined transaction tendencies reflect common general properties that the target customers have tended to purchase;

categorizing the transaction tendencies into at least two categories and indicating different product information by a combination of the transaction tendencies, where the two categories comprise a speed purchasing tendency and a system type purchasing tendency; and

deciding on the product information for each of said target customers by referring to a tendency matrix table based on the transaction tendencies analyzed by the analyzing.

22. An information decision apparatus, comprising:

a replacement commodity finder that finds a commodity suitable to be replaced by a promoting commodity based on commodity specification information that specifies a promoting commodity, where the commodity to be replaced is found by comparing the specification information of the promoting commodity to specification information of previously purchased commodity, the finding in response to identifying the promoting commodity;

a target customer finder that finds a target customer who purchased the commodity suitable to be replaced by searching transaction histories of a plurality of customers for customers that previously purchased the commodity suitable to be replaced;

a transaction tendencies analyzer that determines transaction tendencies of the target customer by analyzing the transaction histories with respect to the target customer, where the

determined transaction tendencies reflect common general properties of commodities that the target customer has tended to purchase; and

a determiner that fits commodity introduction information to the transaction tendencies of the target customer determined by the transaction tendencies analyzer by selecting from among a plurality pre-existing of commodity introductions the commodity introduction information having content that corresponds to the transaction tendencies of the target customer, so as to introduce to the target customer the promoting commodity to replace the commodity that was previously purchased by the target customer.

23. An information decision apparatus, comprising:

a target customer finder that finds target customers who purchased a commodity suitable to be replaced that has a lower performance level than a promoting commodity, the finding in response to identifying the promoting commodity;

a transaction tendencies analyzer that determines transaction tendencies of the target customers by analyzing a transaction history for each of the target customers, where the determined transaction tendencies reflect common general properties of commodities that the target customers have tended to purchase;

a tendency matrix table that categorizes the transaction tendencies into at least two categories and indicating different commodity information by a combination of the transaction tendencies, where the two categories comprise a speed purchasing tendency and a system type purchasing tendency; and

an information decision part that decides on the commodity information for each of the target customers by referring to the tendency matrix table based on the transaction tendencies determined by the transaction tendencies analyzer.

24. A method of information decision, comprising:

finding a commodity suitable to be replaced by a promoting commodity based on commodity specification information specifying a promoting commodity, where the commodity to be replaced is found by comparing the specification information of the promoting commodity to specification information of previously purchased commodity, the finding in response to identifying the promoting commodity;

finding a target customer who purchased the commodity suitable to be replaced by searching transaction histories of a plurality of customers for customers that previously purchased the commodity suitable to be replaced;

determining transaction tendencies of the target customer by analyzing the transaction histories with respect to the target customer, where the determined transaction tendencies reflect common general properties of commodities that the target customer has tended to purchase; and

fitting commodity introduction to the transaction tendencies of the target customer by selecting from among a plurality pre-existing of commodity introductions the commodity introduction information having content that corresponds to the transaction tendencies of the target customer, so as to introduce to the target customer the promoting commodity to replace the commodity to be replaced that was previously purchased by the target customer.

25. A method of information decision, comprising:

finding target customers who purchased a commodity suitable to be replaced that has a lower performance level than a promoting commodity;

determining transaction tendencies of the target customers by analyzing a transaction history for each of the target customers, where the determined transaction tendencies reflect common general properties of products that the target customers have tended to purchase;

categorizing the transaction tendencies into at least two categories and indicating different commodity information by a combination of the transaction tendencies, where the two categories comprise a speed purchasing tendency and a system type purchasing tendency; and

deciding on the commodity information for each of the target customers by referring to a tendency matrix table based on the determined transaction tendencies.

26. A computer-readable recording medium recorded with a program that causes a computer to make an information decision, comprising:

automatically finding a previously purchased computer to be replaced by a computer being promoted, by matching a rank and type of the previously purchased computer to specification information specifying a rank and a type of the promoting computer, where the

ranks rank a speed and a price of the computers relative to other computers, and where the types specify system types of the computers;

finding a target customer who previously purchased the computer to be replaced, by searching transaction histories of a plurality of customers to find customers who previously purchased the computer designated to be replaced;

deriving transaction tendencies of the target customer by analyzing a transaction history of the target customer; and

deciding on a computer introduction that fits the transaction tendencies of the target customer by matching the rank and type of the promoting personal computer to the transaction tendencies of the target customer, where the product information is capable of being used to introduce to the target customer the promoting computer to replace the computer previously purchased by the target customer.

27. A computer-readable recording medium recorded with a program that causes a computer to make an information decision, comprising:

finding target customers who purchased a commodity suitable to be replaced that has a lower performance level than a promoting commodity;

determining transaction tendencies of the target customers by analyzing a transaction history for each of the target customers, where the determined transaction tendencies reflect common general properties of commodities that the target customers have tended to purchase;

categorizing the transaction tendencies into at least two categories and indicating different commodity information by a combination of the transaction tendencies, where the two categories comprise a speed purchasing tendency and a system type purchasing tendency; and

deciding on the commodity information for each of the target customers by referring to a tendency matrix table based on the determined transaction tendencies.

28. A method, comprising:

designating a computer to be promoted, where the computer to be promoted has a computing performance rating, where the computer to be promoted is one of a new computer and a used computer, and where the computer to be promoted has been determined to have sufficient value to be promoted;

responsive to the designating, identifying a particular computer model in a computer model database by comparing the computing performance rating of the computer to be promoted to computing performance ratings of computer models in the computer model database, where the particular computer model is identified because it has a computing performance rating lower than the computing performance rating of the computer designated to be promoted;

searching a customer purchase history database to find a customer that previously purchased an actual computer that corresponds to the identified particular computer model;

determining a category of pricing or speed of computers that the customer has tended to purchase by analyzing the purchase history database with respect to the customer;

determining a category of size of computers that the customer has tended to purchase by analyzing the purchase history database with respect to the customer; and

automatically selecting a pre-determined introduction from among a plurality of pre-determined introductions, where the selected introduction corresponds to both of the purchasing tendency categories, and where the pre-determined introductions each correspond to different combinations of purchasing tendency categories.

APPENDIX B

Location in Office Action	Location in Deaton (col:line)	Text	Applicants understanding
1) p. 5, line 7	64:20-59	<p>It may thus be seen that the program of FIGS. 15A and B provides an efficient technique of building a customer database and mailing list using checks from a variety of different banks. In operation, a customer's checking account identification number is detected by the check reader 119 for use as a unique customer identification code. [customer records are added].... A list of customers is then generated in the database whose last transaction date is prior to a preselected interval of inactivity so that grouping or subgrouping of customers is available for marketing efforts.</p> <p>Alternatively, ... use dollar amounts to determine an "infrequent shopper"....</p>	<p>add new customers, log new customers for future marketing, log infrequent shoppers when they transact</p> <p>purpose is to "mail enticements to the [identified infrequent] customer (col. 63, lines 35-41)</p>
2) p. 5, line 7	63:32-41	<p>FIGS. 15A and B illustrate a marketing program which uses the system of the present invention to detect infrequent customers such that marketing may be directed at those infrequent customers. Specifically, the techniques shown in FIGS. 15A and B identify customers who have not shopped since a predefined target date, such as thirty days. After developing this list of infrequent shoppers, the store can then mail out direct mail enticements to the customer, such as providing them with coupons and the like if they shop at that particular store.</p>	<p>find infrequent shoppers and market to them</p>
3) p. 5, line 7	62:23-28	<p>48 Said TARGET FILE now contains a list of prospective customers from a predetermined geographic area that were NOT contained in the store's active list of customers.</p>	<p>get a list of customers from outside the store's geographic area, and market to them</p>

		53 Marketing may now be targeted toward this list of non-customers, such as mailing of inducement coupons or advertising.	
4) p. 5, line 7	62:51-55	The present system generates a non-customer database which would allow the mailing of advertising material in a geographic area to customers who have not previously shopped, or who have infrequently shopped at the retail store.	see explanation directly above
5) p. 5, line 7	71:46-67	The system can also predict a customer's next due date to purchase a type of product. If a customer begins a pattern of buying a certain type of diapers, but the customer is an infrequent shopper or sub-par spender, this system may induce that customer to shop more often or to spend more by issuing an incentive to the customer to purchase diapers at the time which the customer's history has indicated that the customer buys diapers. By tracking the purchase cycle of various products, the system can anticipate the next purchase date in order to issue incentives prior to that anticipated purchase date, or issue other incentives if the next purchase date passes and no purchase is made. The system also can provide inducement coupons that can be combined. For example, coupons may be generated for a detergent for customers who buy diapers. If a customer continuously buys coffee, a coupon can be generated by the system to provide an incentive on coffee filters. If a customer tends to buy spaghetti sauce at a particular time, the system can generate a coupon to provide a coupon on spaghetti. The system thus uses a prior shopping history of the customer in order to provide the type of coupon most likely to provide an incentive.	for a given customer who has been selected to be incented, time an incentive for a particular product that is predicted to be needed for that customer based on their purchase history
6) p. 5, line 16	71:4-9	Other distinctions may be made by the present system in differentiating between dollar ranges spent by a customer such that coupons may be generated per visit	generate coupons for a given customer based on their spending and visitation habits

		based upon the degree of absenteeism and the shopping price range. The present system may also be used to lay out future coupons such that incentives are decreased or increased in order to maintain certain required levels of spending.	
7) p. 8, line 7		the string of 4 citations is identical to the 4 citations at p. 13, line (see rows *-* of this table)	
8) p. 8, line 21	65:20-24	A promotion may then be selectively offered by the retail establishment to customers within the second database. For example, coupons or other enticements may be mailed directly to the customers on the second database, or distributed at the POS.	at POS, use checking account number to determine if recent customer (customers in the "second database"), if so offer promotion/coupons to these particular customers
9) p. 8, line 21	90:36-50	FIG. 35 is a flow chart of a subroutine for generation of an Echo Coupon. Echo Coupons are utilized for promotions that utilize items an individual customer has historically purchased. To induce a particular customer to meet a shopping criteria, such as more frequent visits, it is preferable to use specific products that the customer has previously preferred, such as certain type of meat or a particular product. In other words, if a customer has shown a proclivity to purchase a certain type of product, Echo Coupons are generated in order to ensure that the customer will wish to use a coupon since they are directed to his/her favorite product. This promotion is scaled by the store to vary in numbers of items promoted and are discounted on each item to the customer:	purpose is to get a particular customer to visit, when generating an incentive for a particular customer, start with account and list of items historically purchased, add those of the items with a high priority to a coupon
10) p. 8, line 21	93:steps 267-272	[effect is summarized as:] [account] profile values may now be used as an indication of how much value to assign to individual coupons. The assumption being that customers with a high profile value require greater incentive than those with lower value	use a customer's profile to determine the value of coupons, for example to determine amount of coupon for a product that is being promoted
11) p. 8, line 21	100:64 - 101:13	The history of products being purchased is stored and organized into arbitrary groups	for a particular to be incented, generate an incentive based on

		<p>by manufacturer in the present database, so that a manufacture does not take business from himself. An average buying cycle may be determined over the entire customer base. As an example, assume for this entire store or this entire region, the average consumption of a coffee product is 4 ounces per week. Although the coffee is only bought every eight weeks, the consumption rate of that coffee is 4 oz. a week. The system may store the average consumption rate for the customer base as a whole so that the store can use that as a starting point for saying that a customer is at or below this consumption rate. That says nothing about the individual household, but the average consumption rate is a starting point that says on a new customer or a new promotion for a coffee, the store has a standard to begin with. Therefore, a customer who buys 3 oz. a week should be incented.</p>	<p>their rate of consumption, per col. 101, lines 43-47, the goal is to <u>customize</u> an inducement</p>
12) p. 8, line 21	101:48 - 103:45	<p>[too long to reproduce in entirety]</p> <p>groupings of products can be manipulated based on ... seasonality ... holidays or based on any number of variables that are pertinent to the manufacturer by combining forces to go after a common customer, the manufacturer and retailer can target market people who are infrequent</p> <p>[Grab Bag Coupons] a truly random [disbursement] ...</p> <p>EXAMPLE 2</p> <p>A store has been allowed 15,000 promotional items by the manufacturer to give away in their NOW-Coupon system. These promotional items are made up of 3,000 each of five different flavors of edible widgets. A decision is made to direct 1,000 of each flavor as Coupon "A" incentives and direct 500 of each flavor to the B,C,D, and E categories. Since less edible</p>	<p>as summarized at col. 104, lines 33-38: "thus ... the present invention provides the ability to generate a large number of different types of coupons depending upon the customer's prior shopping history"</p> <p>grab bags are promotion product groupings, and a particular customer gets a grab bag according to their shopping order and the type of customer they are (e.g. a Coupon "B" customer)</p>

		<p>widgets are allotted to the primary shopper categories, a "Grab Bag" is set up for each with a random ratio to control the rate at which the coupons are dispersed. The following is the configuration for Coupon "B's".</p> <p>Coupon category: Coupon "B"</p> <p>Random ratio: 1:5</p> <p>Grab Bag Coupon #1--Free Box of Edible Widgets--Grape (Issue:500)</p> <p>Grab Bag Coupon #2--Free Box of Edible Widgets--Cherry (Issue: 500)</p> <p>Grab Bag Coupon #3--Free Box of Edible Widgets--Strawberry (Issue: 500)</p> <p>Grab Bag Coupon #4--Free Box of Edible Widgets--Lemon (Issue: 500)</p> <p>Grab Bag Coupon #5--Free Box of Edible Widgets--Orange (Issue: 500)</p> <p>Once this "Grab Bag" is activated, the first four Coupon "B" shoppers would not receive a coupon for edible widgets. The fifth Coupon "B" shopper would receive a coupon for a box of Grape. The next four Coupon "B" shoppers receive no coupon from this "Grab Bag". The tenth shopper overall receives a coupon for a box of Cherry, and so on until 500 of each flavor has been issued to Coupon "B" shoppers.</p> <p>...</p>	
13) p. 13, line 19	1:66 - col.2 4	Retail and other business establishments that serve a large number of customers generally have a problem obtaining transactional information about their customers, such as for identifying new customers and determining transactional patterns for repeat customers (such as	problem of identifying new customers and transaction patterns

		transactional frequency and dollar volume).	
14) p. 13, line 19	65:61 - 67:steps 40 to 46	5.5. Dissemination Of Point-Of-Sale Coupons And Direct Mail Coupons Based Upon Shopping History. FIGS. 17A and B illustrate a program flow chart of a marketing technique utilizing the present invention, wherein coupons may be distributed to customers based upon the frequency of shopping, dollar volume or other criteria based upon the shopping habits of the customer. ...	coupons may be distributed to customers based upon frequency of shopping, dollar volume, or other criteria based upon the shopping habits of the customer
15) p. 13, line 19	68:8-16	The present invention looks at the history of the shopper in question and induces the shopper to return based upon preselected criteria such as has the customer purchased above a certain amount of dollars, has the customer purchased between certain amounts of dollars or less than a certain amount of dollars, or has the customer purchased over a certain amount of merchandise over a period of time, or has the customer not been at the store to shop within a predetermined time interval.	identify customers with certain shopping history traits and try to induce such shoppers to return to the store
16) p. 13, line 19	71:4 - 72:58	[entirety of columns 71 and 72, not reproduced]	inducement effect of coupons is tracked per customer (col. 71, p. 1); target expected behavior by generating coupons or issuing incentives (col. 71, p. 2); print coupons relevant to past purchases for effective incenting (col. 71, p. 3); issue incentives based on purchase cycle of various products again to improve likelihood that incentive is effective for the particular customer receiving it (col. 71, p. 4); col. 72 discusses other variants of tailoring an incentive to a particular, for example based on how price sensitive they are -- all of col. 71 and 72 relate to first identifying a customer, as at POS, and then tailoring incentives for the given customer

APPENDIX C

general feature / claim	1	9	10	15	16	21	22	23	24	25	26	27	28
A searching for a customer who purchased a product suitable to be replaced	x	x	x	x	x	x	x	x	x	x	x	x	x
B customers who purchased a product suitable to be replaced <i>by the product being promoted</i>	x		x		x		x		x		x		x
C finding product to be replaced linked to and following identification of promotion product	x		x		x		x		x		x		x
D fitting product introduction information	x		x		x		x		x		x		x
E finding replacement product based on lower performance		x		x		x		x		x		x	
F finding replacement product based on size													x
G finding replacement computer based on speed and type			x										